

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Aoki et al.

Patent No.: RE40,871

Issued: August 18, 2009

For: **METHOD OF PRODUCING PLASMA
DISPLAY PANEL WITH
PROTECTIVE LAYER OF AN
ALKALINE EARTH OXIDE**

Confirmation No. 7590

January 12, 2010

Costa Mesa, California 92626-7689

REQUEST FOR CERTIFICATE OF CORRECTION

ATTN: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

Attached is a proposed Certificate of Correction to be issued in the above-identified case.

On the Front Page under Foreign Application Priority Data the third priority document is listed incorrectly.

Jun. 24, 1996 (JP).....8-16239 should read “8-162639”.

This priority document was correctly listed on the original US Patent, as well as the Claim of Foreign Priority made by the inventors for this reissue application which was filed with the Consent of Assignee filed on March 12, 2002. Copies of the face page of the US Patent and the Claim of Foreign Priority are enclosed.

There is no fee for this request as these represent US Patent Office errors.

If there are any questions with regard to this matter, please contact the undersigned attorney at the listed telephone number.

Very truly yours,

SNELL & WILMER L.L.P.


Joseph W. Price
Registration No. 25,124
600 Anton Boulevard, Suite 1400
Costa Mesa, CA 92626-7689
Phone: (714) 427-7420
Fax: (714) 427-7799

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : RE40,871

Page 1 of 1

APPLICATION NO. : 09/997,536

ISSUE DATE : August 18, 2009

INVENTOR(S) : Masaki Aoki et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Front Page under Foreign Application Priority Data the third priority document is listed incorrectly.

Jun. 24, 1996 (JP).....8-16239 should read "8-162639".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Joseph W. Price, Esq.
Snell & Wilmer LLP
600 Anton Boulevard, Suite 1400
Costa Mesa, CA 92626

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



US005993543A

United States Patent [19]
Aoki et al.

[11] Patent Number: **5,993,543**
[45] Date of Patent: **Nov. 30, 1999**

[54] **METHOD OF PRODUCING PLASMA DISPLAY PANEL WITH PROTECTIVE LAYER OF AN ALKALINE EARTH OXIDE**

[75] Inventors: Masaki Aoki, Mino; Hideo Torii, Higashiosaka; Eiji Fujii, Hirakata; Mitsuhiro Ohtani, Sakai; Takashi Inami, Saita; Hiroyuki Kawamura, Katano; Hiroyoshi Tanaka, Kyoto; Ryulichi Mural, Toyonaka; Yasuhisa Ishikura, Katano; Yutaka Nishimura, Kadoma; Katsuyoshi Yamashita, Katano, all of Japan

[73] Assignee: **Masaki Aoki Et Al., Japan**

[21] Appl. No.: **08/890,577**

[22] Filed: **Jul. 9, 1997**

Related U.S. Application Data

[62] Division of application No. 08/766,030, Dec. 16, 1996, Pat. No. 5,770,921.

[30] **Foreign Application Priority Data**

Dec. 15, 1995	[JP]	Japan	.....	7-326766
Feb. 1, 1996	[JP]	Japan	.....	8-016326
Jun. 24, 1996	[JP]	Japan	.....	8-162639
Aug. 26, 1996	[JP]	Japan	.....	8-223428

[51] Int. Cl. ⁵ C30B 29/16; C30B 23/00

[52] U.S. Cl. 117/88; 117/101; 117/103;
117/104; 117/944

[58] Field of Search 117/3, 88, 92,
117/101, 103, 104, 944; 313/572, 581,
582

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,198,585	4/1980	Yamashita et al.	.....	313/587
4,584,086	4/1986	Hayakawa et al.	.....	204/429
5,458,086	10/1995	Smith et al.	.....	117/200
5,604,396	2/1997	Watanabe et al.	.....	313/485
5,818,168	10/1998	Ushifusa et al.	.....	313/582
5,844,362	12/1998	Tanabe et al.	.....	313/506

FOREIGN PATENT DOCUMENTS

279744	8/1988	European Pat. Off. .
649159	4/1995	European Pat. Off. .
5234519	10/1993	Japan .
5342991	12/1993	Japan .
6342631	12/1994	Japan .
2109628	6/1983	United Kingdom .
9519027	7/1995	WIPO .

OTHER PUBLICATIONS

"E-Beam Evaporated Glass and MgO Layers for Gas Panel Fabrication," by K.C. Park et al., IBM J. Res. Develop., vol. 22, No. 6, Nov. 1978.

"Fluorescent Substance for Color Plasma Display Panel," by J. Koike, O Plus E, No. 195, 1996.

"Low-Voltage Operated AC Plasma-Display Panels", by T. Shinoda et al., IEEE Transactions on Electron Devices, vol. ED-26, No. 8, Aug. 1979.

Primary Examiner—Felisa Hitesher

Assistant Examiner—Donald L. Champagne

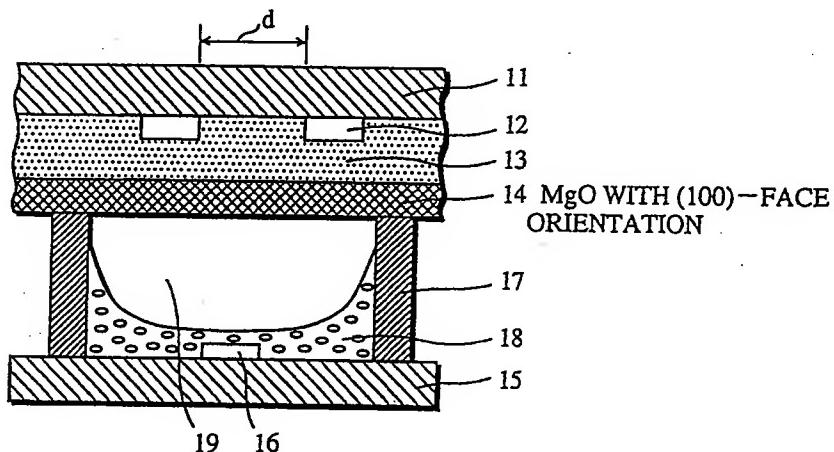
Attorney, Agent, or Firm—Price, Gess & Ubell

[57]

ABSTRACT

The first object of the present invention is to provide a PDP with improved panel brightness which is achieved by improving the efficiency in conversion from discharge energy to visible rays. The second object of the present invention is to provide a PDP with improved panel life which is achieved by improving the protecting layer protecting the dielectrics glass layer. To achieve the first object, the present invention sets the amount of xenon in the discharge gas to the range of 10% by volume to less than 100% by volume, and sets the charging pressure for the discharge gas to the range of 500 to 760 Torr which is higher than conventional charging pressures. With such construction, the panel brightness increases. Also, to achieve the second object, the present invention has, on the surface of the dielectric glass layer, a protecting layer consisting of an alkaline earth oxide with (100)-face or (110)-face orientation. The protecting layer, which may be formed by using thermal Chemical Vapor Deposition (CVD) method, plasma enhanced CVD method, or a vapor deposition method with irradiation of ion or electron beam, will have a high sputtering resistance and effectively protect the dielectrics glass layer. Such a protecting layer contributes to the improvement of the panel life.

27 Claims, 9 Drawing Sheets



NAK1-AY33ara

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application for Reissue of:

U.S. Patent No. 5,993,543

Issued: November 30, 1999

Applicant: Masaki Aoki et al.

Serial No.: 08/890,577

For: **METHOD OF PRODUCING PLASMA DISPLAY
PANEL WITH PROTECTIVE LAYER OF AN
ALKALINE EARTH OXIDE**

CLAIM OF FOREIGN PRIORITY

Box Reissue
Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

We, the inventors, declare that the earliest application for patent or inventors' certificate on this invention filed in any country foreign to the United States of America by us or our legal representatives or assigns is as follows:

Japanese Patent Application No. 7-326766 filed on December 15, 1995

Japanese Patent Application No. 8-016326 filed on February 1, 1996

Japanese Patent Application No. 8-162639 filed on June 24, 1996

Japanese Patent Application No. 8-223428 filed on August 26, 1996

We hereby declare that all statements made herein of our own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Executed on December 26, 2001, at Osaka,
Japan.

Masaki Aoki
Masaki Aoki

Executed on December 26, 2001, at Osaka,
Japan.

Hideo Torii
Hideo Torii

Executed on December 26, 2001, at Osaka,
Japan.

Eiji Fujii
Eiji Fujii

Executed on December 26, 2001, at Osaka,
Japan.

Mitsuhiro Ohtani
Mitsuhiro Ohtani

Executed on December 26, 2001, at Osaka,
Japan.

Takashi Inami
Takashi Inami

Executed on December 26, 2001, at Osaka,
Japan.

Hiroyuki Kawamura
Hiroyuki Kawamura

Executed on December 26, 2001, at Osaka,
Japan.

Hiroyoshi Tanaka
Hiroyoshi Tanaka

Executed on December 26, 2001, at Osaka,
Japan.

Ryuichi Murai
Ryuichi Murai

Executed on December 26, 2001, at Osaka,
Japan.

Yasuhisa Ishikura
Yasuhisa Ishikura

Executed on December 26, 2001, at Osaka,

Japan.

Yutaka Nishimura
Yutaka Nishimura

Executed on December 26, 2001, at Osaka,

Japan.

Katsuyoshi Yamashita
Katsuyoshi Yamashita